REMARKS

Claims 1-3, 5-12, 14-18, 24-50, 52-56, and 62-65 are all the claims pending in the application.

Response to Claims Rejections Under 35 U.S.C. § 103

A. At page 2 of the Action, claims 1-3, 5-12, 14-18, and 24-27 are rejected under 35 U.S.C. §103(a) as being obvious over Appleton in view of Sakai.

In the Action, the Office takes the position that Appleton teaches similar materials as the present composition, including a polymeric binder and Triclosan, an organic antimicrobial agent. Further, the Office asserts that Sakai also teaches a composition similar to the present polymeric binder comprised of a polyester polymeric binder and Triclosan antimicrobial agent.

Applicants respectfully traverse and submit that the Office's reading of Appleton and Sakai is too broad.

According to the Office, Appleton's composite has an outer surface with an antimicrobial effectiveness within 24 hours, which is evidence that the agents of Appleton tend to migrate to the surface similar to the presently claimed agents. Further, the Office's contention is that this "restoration" process of Appleton is evidence that the antimicrobial agents are dispersed throughout the entire Appleton composite, further referring to column 3, lines 46-49 of Appleton.

However, Applicants submit that Appleton's restoration test does not demonstrate *de facto* antimicrobial agent migration.

Rather, Applicants submit that the Appleton "restoration" test only shows that antibacterial effectiveness increases as a function of how long the bacteria is allowed to contact a surface containing antimicrobial agents. If anything, the Appleton "restoration" merely shows that abrading the surface of the Appleton composition by about 1 and 28 microns, i.e. the surface

of Appleton's composite, replenishes the agent effectiveness. See Appleton, column 5, lines 36-41 and column 6, lines 16-18.

In contrast, the present composite does not required continued abrasion of the surface because the present agents have the ability to migrate; the agents of Appleton do not.

Presumably as a means to further explain this deficiency in the Appleton composite, it is the Office's position that the antimicrobial agents of Appleton would, in any case, be expected to exhibit controlled migration through the polymeric binder because of the *similarities* between the present composite and the composite of the cited art. To support this contention, the Office refers to column 3, lines 46-49 of Appleton, disclosing that at least one antimicrobial agent is "dispersed" in the matrix.

However, Applicants point out that the Appleton composite does not contain any aggregates and thus is not the same as the present composite. This is not an insignificant omission. Rather, based on the individual percentages of the components included in the composites, the amount of aggregate accounts for a comparatively large percentage of the composite. Accordingly, while Applicants understand that the Office cites to Sakai as teaching this aggregate limitation, Applicants also submit that the Office cannot rely on an ungrounded statement that antimicrobial agents of Appleton would be expected to migrate based the *similarities* between the present composite and the composite of Appleton composite. This composites are not similar, thus the assertion does not make sense.

Furthermore in this respect, Applicants continue to reiterate that there is simply no teaching in Appleton or Sakai that supports any teaching of antimicrobial migration.

In view of the above, it is Applicants' contention that neither Appleton nor Sakai, alone or in combination teaches or suggests all of the claim limitations and thus cannot be said to render the present claims obvious.

With regard to the composition of the aggregate, it is the Office's position that there is no clear teaching away in Appleton regarding an amount of aggregate, and further, that the amount of aggregate would be an obvious modification for one skilled in the art.

Essentially, the Office's position is that simply adding aggregates to a formed composite would be commonplace and reasonable to one skilled in the art. However, nothing in Appleton or Sakai gives reasons why one would readily make this substitution.

Further, Applicants point out for clarification purposes that previous arguments were directed to a lack of a motivation for combining Appleton and Sakai and not, as suggested by the Office, to an argument that the references teach away. To clarify the record, Applicants reiterate that there is no suggestion or motivation to utilize the amount of aggregate and resin of Sakai in the composite material of Appleton because the proposed modification would drastically change the composition such that Appleton's composite would be rendered unsatisfactory for its intended aesthetic and antimicrobial purposes.

Specifically, the compositions of Appleton and Sakai are not designed arbitrarily, rather, the components are specific to and necessary for their respective aesthetic and antimicrobial purposes.

Appleton discloses a solid surface material comprising an acrylic matrix with ATH as filler, Corian®. See column 1, line 35 of Appleton. Appleton further discloses that these solid surface materials comprise a resin, a filler and an antibacterial agent. See column 2, lines 1-2. Regarding the amounts of these components, Appleton discloses that the fillers can be present in

effective amounts from as low as about 20% up to about 75% by weight (see col. 4, lines 63-65) and that the amount antibacterial agent is at least about 0,1% by weight (see col. 3, lines 52-55). The examples of Appleton (see Tables 1-3) define as the preferred filler amount around a 65% by weight.

In contrast, Sakai discloses a composite material that comprises an organic component, an inorganic component and an inorganic antimicrobial agent. See abstract and column 8, lines 59-62. The inorganic component amount is established over a 60% by weight with respect to the total amount and more preferably over a 80% by weight. See column 3, lines 20-23. This preferred amount is very different to the 65% disclosed in Appleton. Therefore, as compared to the composite of Sakai, the Appleton composite contains a lower petrous aggregate content and a higher resin content. This compositional difference explains why the composite of Appleton has a closer appearance to a plastic composite. See Sakai, column 4, lines 65-67.

These compositional differences affect not only the appearance of each composition but also the physical and chemical properties of the compositions. Whereas the composite material disclosed by Appleton has a higher appearance to a plastic material, the composition of Sakai has the appearance of a natural stone. These products will therefore have very different properties such as the resistance to scratching, resistance to flexion, or density. For example, the composition of Appleton is thermoforming and can be repaired with woodworking tools, while the composition of Sakai cannot. See the attached data specification sheets and product descriptions, also available at:

http://www.corian.es/Corian/es_ES/assets/downloads/documentation/what_is_corian_es.pdf and http://www.silestone.com/downloads/espagnol/folleto-arquitectos.pdf.

Moreover, the differences in particle size serve to further distinguish the compositions of Appleton and Sakai. Sakai discloses two groups within the inorganic component based on the particle size, small particles between 2-70 mesh, and filling particles below 100 mesh. The particle size combination of Sakai is essential to give the final composition the properties and desired appearance of the product. The particles of bigger size are the principal factor for the external appearance and the physical nature of the man-made stone (Sakai, col. 3, lines 59-65), while the smaller particles contribute to the solidness and flexibility of the man-made stone. See column 4, lines 1-5 of Sakai.

In contrast to Sakai, Appleton discloses a particle size on a much smaller scale. With regard to the particle size of the inorganic component, Appleton only discloses that the ATH particle size of Example 59 is 45Fm (1fm= 10^{-15m})[1]. Thus, the resulting particle size difference between Appleton and Sakai is dramatic. Appleton discloses a composition having particles of dramatically smaller and uniform size, as a means to obtain a product with an aesthetic and properties different from the product obtained by Sakai.

Accordingly, in view of the above differences in composition and resulting particle size between the compositions of Appleton and Sakai, one skilled in the art would not be motivated to substitute the amount of aggregate and resin of Sakai in the composite of Appleton because the proposed modification would drastically change the intended appearance and composition of the resulting product.

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[1] Applicants consider that the measurement unit "Fm" to be an impossibly small value, and instead consider that the particle size in Appleton is in micrometers. If the measurement unit is indeed micrometer and not "Fm," the resulting particle size difference between Appleton and Sakai is dramatic nonetheless.

For at least the above reasons, the Office is requested, respectfully, to withdraw the rejection of claims 1-3, 5-12, 14-18, and 24-27 over Appleton in view of Sakai.

B. At page 6 of the Action, claims 1-3, 5-12, 14-18, and 24-27 are rejected under 35 U.S.C. §103(a) as being obvious over Sakai in view of either US 2003/0096545 to Payne or Ramirez.

The Examiner admits that Sakai fails to disclose antimicrobial agent, and resorts to Payne and Ramirez as secondary references cited only for teaching that Triclosan is a known and common antimicrobial agent. Based on the teachings of Ramirez and Payne, it is the Office's contention that it would be obvious to use known Triclosan in the composite of Sakai.

Applicants respectfully traverse the rejection for the following reasons.

The composite of the present invention requires an antimicrobial agent that can exhibit controlled migration through the polymeric binder. In contrast, Sakai employs inorganic agents that are not soluble in resin and therefore will be disposed on the surface of the composite material. To correct this deficiency, the Examiner cites Ramirez and Payne as disclosing that Triclosan is a known and common antimicrobial agent.

However, Applicants submit that regardless of whether Triclosan was "known in the art," there remains no motivation in the art to utilize Triclosan in the composite of Sakai. As discussed, Sakai employs inorganic agents that are not soluble in resin and therefore will be disposed on the surface of the composite material. If utilized as an antimicrobial agent in the composite of Sakai, Triclosan will thus also be disposed on the surface of the composite. As an inorganic agent, Triclosan is most effectively utilized for its ability to migrate through the polymeric resin. However, this ability will be wasted if utilized in the composite of Sakai.

Importantly and in addition to the above, it is clear that even if one skilled in the art were substitute Triclosan, as taught by Ramirez or Payne in the composite of Sakai, the resulting composite cannot comprise a migratory antimicrobial agent and thus, the resulting combination does not teach or suggest all of the claim limitations and thus cannot be said to render the present claims obvious.

Accordingly and for at least the above reasons, the Office is requested, respectfully, to withdraw the rejection of claims 1-3, 5-12, 14-18, and 24-27 over Sakai in view of Ramirez or Payne.

C. At page 9 of the Action, claims 1-3, 5-12, 14-18, and 24-27 are rejected under 35 U.S.C. §103(a) as being obvious over Sakai in view of Appleton. The Examiner provides detailed commentary on pages 9-11 of the Action.

Applicants respectfully traverse the rejection over Sakai in view of Appleton for the following reasons.

Applicants respectfully submit that none of the references, either alone or in combination, disclose all of the elements of present claim 1.

As discussed above, Sakai employs inorganic agents that are not soluble in resin and therefore will be disposed on the surface of the composite material. Moreover, Sakai does not teach any migratory antimicrobial effect, much less incurred from an organic antimicrobial agent such as Triclosan. Accordingly, Sakai cannot be said to teach or suggest a composition having antimicrobial agents that can exhibit controlled migration through the polymeric binder as required by present claim 1, and Appleton fails to correct this deficiency for the reasons discussed above.

Specifically, there is no suggestion or teaching in Appleton of antimicrobial agent migration. Rather, Appleton only teaches that the outer surface of the polymeric matrix has an antimicrobial effectiveness, which requires continued surface restoration to maintain its effectiveness. See Appleton, column 5, lines 31-35. Thus, one skilled in the art would not be motivated to use the antimicrobial agent of Appleton in the composition of Sakai because Appleton teaches that the antimicrobial agents are consumed in a short time period.

Furthermore, even when Sakai and Appleton are combined, the presently claimed invention achieves unexpected results over the combination of Sakai and Appleton by having a composition that exhibits antimicrobial migration neither taught nor appreciated by Sakai and Appleton.

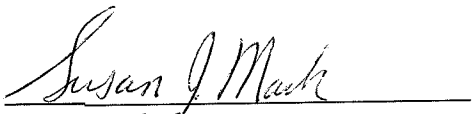
In view of the above, the Examiner is requested, respectfully, to withdraw the rejection of claims 1-3, 5-12, 14-18, and 24-27 over Sakai and Appleton.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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